

January 18, 1876.

Robert Hudson, Esq., F.R.S., V.P., in the Chair.

The following papers were read :—

1. On a Peculiarity in the Carotid Arteries, and other Points in the Anatomy, of the Ground-Hornbill (*Bucorvus abyssinicus*). By A. H. GARROD, M.A., F.Z.S., Prosector to the Society.

[Received December 10, 1875.]

A specimen of *Bucorvus abyssinicus* having recently died in the Society's Gardens, I have had the opportunity of examining the anatomy of that genus for the first time. In all respects, except the one to be referred to as regards its arterial system and a minor myological feature, it agrees with *Buceros*. As is the case in all the Bucerotidæ, there was not a trace of fat to be found on any part of the body of the adult bird, though it may be present in young individuals; and the air-cells extended so extensively among the muscles that on removing the skin no dissection was required to display each muscle from origin to insertion. The muscular tissue was also strikingly compact and dry, as in the Hares among mammals, in which animals also it is known that fat is never deposited. The oil-gland, as in *Buceros*, instead of being simply tufted, was also covered with a dense mat of short feathers, about a square inch in area.

In *Buceros*, as in most birds, the two carotid arteries, immediately they separate from their respective innominate arteries, converge, and meet before they have gone any considerable distance up the neck, to run together in the median hypapophysial canal on the anterior surface of the cervical vertebræ. In some Parrots the left carotid, instead of coursing the above-mentioned canal with its fellow, runs up along the side of the neck together with the left pneumogastric nerve to reach the head. In *Bucorvus*, in the specimen dissected by me at least*, a further extension of this peculiarity obtains; for both the carotids, instead of meeting and running together, course up the *sides* of the neck in company with the pneumogastric nerves and jugular veins of their respective sides, as they do in mammals, and in no other birds, as far as I am aware. Another peculiarity is, that these abnormally placed carotids are particularly small in calibre; and I noticed that the vertebrals were as conspicuously large, evidently to make up the blood-supply of the head.

As to the visceral anatomy, it may be mentioned that the uniformly cylindrical crop leads, through the zony proventriculus, to the stomach, which is much like that of *Buceros*†, but more muscular, and with the dense epithelial lining much more firmly

* A second specimen, since received, entirely agrees with the above description.

† *Vide* Trans. Z. S. vol. i. pl. xviii. p. 122.

